Abstract of Invited Review Paper 'To Be I'resented at I. A.U. Colloquium No. 156
THE IMPACTS OF COMET D/SHOEMAKER-LEVY 9 INTO JUPITER
The Johns Hopkins University, Baltimore, Md.
9-12 May 1995

TIDAL BREAKUP OF THE NUCLEUS OF COMET SHOEMAKER-LEVY 9: A REVIEW

Zdenek Sekanin a

Jet Propulsion Laboratory, California Institute of Technology Pasadena, California 91109, U.S.A.

The breakup of comet Shoemaker-Levy 9 is discussed both in the context of splitting as a cometary phenomenon, comparing this object with other split comets, and as an event with its own idiosyncrasies. The physical appearance of the comet is described, features diagnostic of the nature of the tidal disruption arc identified, and the implications for modelling the event arc spelled out. Also discussed is secondary fragmentation, documenting a continuing disintegration during 1992-94. Much attention is paid to tile controversies that concern the models of a strengthless agglomerate versus a discrete cohesive mass and involve a variety of estimates for the dimensions of the progenitor object and its major fragments.